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## **Committee on New Researchers**

### **Report of the Chair, Mayetri Gupta**

(as of May 10, 2008)

#### **Tenth New Researchers' Conference (2007 NRC)**

**Program Chair:** Mayetri Gupta (The University of North Carolina at Chapel Hill)

**Local Chair:** Xiaoming Sheng (University of Utah)

The Tenth Conference of New Researchers in Statistics and Probability, sponsored by the IMS, was held on the beautiful campus of the University of Utah in Salt Lake City, from July 24th to 28th, 2007. This yearly conference provides a unique opportunity for new researchers to exchange research ideas and initiate contacts amongst themselves in an informal setting as well as provide them an opportunity to interact with the invited senior participants. As part of the conference, each participant presented a talk or poster on their research. The meeting was structured to provide ample time and opportunities for them to discuss their research interests and life as new researchers over meals and a number of social activities. A list of participants, their abstracts, invited speakers, presentation slides, and photographs can be found at <http://www.bios.unc.edu/~gupta/NRC>.

Out of the people who applied 8 people were turned away for the following reasons: 5 people who will receive their PhD in 2008 or later; 3 people who missed the application deadline by at least a month. This left "eligible" 56 participants that we invited to attend the meeting; 45 accepted. After cancellations, 43 participants attended, a smaller number than last year.

The majority of participants came from the United States, but also included researchers from Canada, Singapore, and Spain. The talk sessions were diverse in content, ranging from stochastic and space-time processes, semiparametric and nonparametric inference, data mining, classification and clustering techniques, methods for high-dimensional data, Bayesian methodology, statistical computing, and recent advances in survival analysis. In addition to participant talks, we had a varied range of invited sessions at the meeting. On Wednesday afternoon, we had Samuel Kou, John L. Loeb Associate Professor of Statistics at Harvard University, give the Tweedie New Researcher Invited Lecture on "Stochastic modeling and inference in nano-scale biophysics". Richard Tweedie

played a significant role throughout his professional career in mentoring young colleagues at work and through professional society activities. Funds donated by his friends and family cover travel for the award winner (The winner is selected by the IMS Travel Awards Committee). On Thursday, there was a journal panel consisting of Susan Murphy (The Annals of Statistics), David Banks (Journal of the American Statistical Association), David van Dyk (Journal of Computational and Graphical Statistics), and Geert Molenberghs (Biometrics). They offered insights into the journal submission and review process, and discussed ways of communicating effectively with the audience and editors. The Conference Dinner followed that evening, with a talk by Michael Newton, Professor of Statistics, Biostatistics, and Medical Informatics at the University of Wisconsin, Madison, titled "Buried treasures: examples of old statistics in new contexts". His presentation brought out a number of interesting examples in his research career where the solution to a contemporary statistical problem (applied, methodological, and theoretical) was found by realizing a new interpretation of an uncelebrated but beautiful statistical result from the past. At noon on Friday, the luncheon speaker was David Banks, Professor of Statistics at Duke University, whose talk "Snakes & Ladders: Building a Career in Statistics" described career strategies aimed at improving the chances of achieving new researchers' professional goals. Friday afternoon started off with a grants panel session, including Grace Yang and Gabor Szekely from the National Science Foundation, Wendy Martinez and Jeffrey Solka from the Office of Naval Research, and Ram Tiwari from the National Cancer Institute (National Institutes for Health). A panelist from each funding agency gave a short presentation discussing funding opportunities at their institution and tips for writing successful proposals, followed by a half-hour long question-answer session with the audience. Question topics ranged from reviewing procedures, to timing, and styles of successful writing. The grants panel was followed by the poster session, where seven participants presented their research on topics varying from graphical models, functional data analysis to dose-response studies and control charts. The conference ended on Saturday with a talk by Deborah Nolan, Professor of Statistics at the University of California at Berkeley, entitled "The Why and How of Teaching Statistics". Her talk, which included an interactive session with the audience, focused on bringing new and non-traditional ideas and methods into ways of teaching statistics to undergraduate students to get basic statistics concepts across, and provided many practical tips on teaching, classroom and course management.

### **Funding for the conference**

The New Researchers' Committee has an account that contains money left over from previous meetings. At the start of the year, the budget was \$35,000. Elyse Gustafson maintains this account. The IMS does not add money to this account, and it seems like no grant is interested in allowing us



to transfer any money left in the grants to this account. By the end of the year, we will have spent about \$4,400 of this money paying for costs that grants cannot cover (e.g., alcohol for the opening mixer and conference dinner – on the University of Utah campus you cannot charge the participants for alcohol). Also travel and accommodation for foreign participants will be covered by this money.

We received funding from the National Science Foundation for \$20,000, \$15,000 from the National Security Agency (NSA), \$10,000 from the Office of Naval Research (ONR), and \$19,000 from the National Institutes of Health (NIH) (including \$9000 left over from the previous year).

We covered all accommodation costs and meal costs for the conference participants. For US residents and Canadian residents we reimbursed \$300 for travel (up from \$200 last year). For the foreign participants, we covered \$400 per person for travel from Canada and \$600 per person for participants from Europe and Asia. We covered travel and accommodation for all invited guests. We saved (at a guess) between \$3,000 and \$4,000 because some of the invited guests, conference organizers, and even some participants did not claim travel expenses.

Committee members Mayetri Gupta and Xiaoming Sheng were instrumental in securing these funds. We received much needed support from Peter Craigmile, Ryan Elmore, and Xiaojian Xu, and excellent administrative support from both the University of Utah and the University of North Carolina at Chapel Hill.

### **Things to think about regarding this meeting**

1. Number and diversity of participants. The number of applicants for this conference has been increasing significantly for the last 3-4 years, however this year we had a smaller number. If the number of participants gets too large, it becomes difficult to maintain the original format where every participant was allowed to present their work in a talk. This year we could accommodate almost all participants who wished to give a talk, and the remaining ones who volunteered to give posters instead were given the opportunity to do so.
2. One aspect we need to think about is how to make this conference more visible to new researchers in Probability, since the participants over the last few years have been increasingly from areas in Statistics. The few New Researchers' in Probability that attended felt they did not enough opportunities to interact with people sharing similar research interests. Possible ways in which this could be done in future conferences include (i) advertising in journals/newletters more targeted to probability researchers, (ii) inviting prominent senior researchers in Probability to give invited talks and (iii) securing more funding for foreign par-

ticipants, as a number of applicants that did not finally attend due to lack of sufficient funds over the last couple of years had research interests closer to probability.

3. We did not fully support foreign travel this time around. We accepted a number of applications from foreign participants, but due to limited resources (we only can pay for these people out the IMS New Researcher budget which only goes down), we reduced the level of travel support to each person.
4. One phenomenon with the foreign applications was that a number of people applying were Ph. D. students who had more than a year left to finish, hence making them ineligible to attend this conference. We may have to think of ways of making the conference appear more attractive (and visible!) to foreign researchers who have already started their post-Ph. D. careers.
5. Some aspects of the budget problem seems to be getting worse. Are there any ideas of whether it is possible in some way to increase the IMS New Researcher budget? Some ways we could consider to increase the budget:
  - (a) Should we charge a small registration fee to offset costs of cancellations, and cover things that our grants cannot cover (e.g., foreign travel, accommodations and meals; alcohol)?
  - (b) Allow statistical book publishers to exhibit/advertise (maybe at the same time as the poster session) thus providing additional funds that could be used for the conference?
6. Some ideas for future meetings (based on committee discussion and feedback collected from the participants attending this year)
  - (a) We could limit the length of the conference to 4 days instead of 5, and consider having two parallel sessions if necessary (this would involve very careful work to ensure topics are sufficiently divergent that people's interests do not conflict – could be hard to implement). The length of the conference, followed by the JSM directly in the case of many participants, was a source of exhaustion to many participants, and ways to avoid this should be thought about.
  - (b) Could we have some times allotted for themed discussions on common research topics to bring new researchers together and brainstorm/discuss their ideas?
  - (c) A large number of participants suggested having fewer talks and more posters (with a longer, or possibly two, poster sessions). If we have the same (or higher) number of participants in future years, this probably could be an option. In any case, there seemed to be overall agreement that there were too many talks in one day.



- (d) Have a "seminar by a senior speaker on how to give effective talks". Also, Terry Speed gave a wonderful (as well as controversial!) opening talk with general advice for New Researchers' at the workshop in 2004, which almost set the tone of the entire conference. Is this worth doing?
- (e) The 12 minute talk format seemed to be popular with this year's participants. The format seems to work quite well overall as long as participants are prepared in advance for it. But as one participant notes, it would be helpful to provide more guidelines for presenting short talks in advance, as some participants tried to present too much material, thus obscuring the focus of the presentation.
- (f) Would it be meaningful to have a IMS New Researchers' conference proceedings? It could be wholly in electronic format (to minimize costs), but would provide a nice way for people to present their research in more detail for those who are interested in following up.
- (g) Depending on the location of the conference, could we have an (optional) group activity/excursion (e.g. a hiking trip or visit to a local point of interest), maybe Saturday afternoon.

## **The proposed 2008 New Researchers' Conference in Boulder**

**Location:** University of Colorado, Boulder, CO and The National Center for Atmospheric Research

**Program Chair:** Rebecka Jornsten, Department of Statistics and Biostatistics, Rutgers University

**Local Chair:** Ryan Elmore, Department of Statistics, Colorado State University

**Funding:** Funding will be requested from the same organizations that have funded previous NRCs. The proposals to NSA and NIH/NCI for 2008 were submitted in October, 2007. We received notification of support from NSF and ONR in February, 2008.

**Participants:** We received 33 applications. The invitations to the senior speakers are out, and a number of panelists and speakers have already accepted.



## Current New Researchers Committee Members

### Until August 2007:

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